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Tormasov *et al.*
Appl. No. 09/918,031***Remarks***

Claims 1-20 are pending in this application. Claims 1, 4, 10 and 16 have been amended.

In the Office Action dated May 13, 2005, claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aziz *et al.*, U.S. Patent No. 6,779,016 and Huang *et al.*, U.S. Patent Publication No. 2002/0091697.

Interview at the USPTO on July 26, 2005

Applicants' representative thanks the Examiner for the courtesies extended during the in-person interview at the USPTO of July 26, 2005. During the interview the differences between the claimed invention and the cited references (particularly Aziz) were discussed. The Applicants' arguments, which were also presented to the Examiner, are summarized below.

The rejections under 35 U.S.C. § 103(a)

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aziz *et al.*, U.S. Patent No. 6,779,016 and Huang *et al.*, U.S. Patent Publication No. 2002/0091697. These rejections are respectfully traversed.

As discussed during the interview, Applicants recognize that one of the problems in the software industry is the overuse of the word "virtual," causing difficulty in searching, and making unrelated concepts appear related merely due to the use of a common word ("virtual"). Aziz is directed to a "computing grid," or a "Virtual Server Farm" (VSF). The VSF takes multiple servers, and makes them act as a single server, as

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far as the user is concerned. This is indeed one way to virtualize computer systems, but only one way out of many.

The present application is directed to the exact opposite of Aziz: the concept of a Virtual Private Server (or virtual environments) discussed in the present application is “one machine, multiple virtual environments,” see, e.g., FIG. 2 and corresponding portions of the specification. For example, the claim language “system for efficient utilization of a single server with a single operating system kernel” (see claim 1) is specifically directed to this aspect. Phrased another way: Aziz describes multiple-boxes-single-virtual-server. The present application describes the opposite: a single-box-multiple-virtual-servers.

Applicants also respectfully invite the Examiner’s attention to the passages in Aziz that refer to the VSF being distributed over a WAN (see, e.g., col. 5, lines 9-13 and col. 5, lines 40-46). It is meaningless to talk about a single physical server being distributed over a WAN—this is a contradiction in terms.

Claim 1 also recites the aspect of “emulation of hardware resource or a dedicated memory is not required.” As best understood from the passage at col. 15, lines 52-63, Aziz is the opposite—Aziz **does** dedicate memory to the processes running in the VSF. Similarly, the passage at col. 15, lines 15-21 confirms that each server receives its own copy of application server. Col. 17, lines 14-16 also confirm that Aziz contemplates using conventional computers as servers—in other words, there is nothing in Aziz that suggests **not** dedicating memory to the virtual server running on these conventional computers. Nor would it make sense for Aziz to **not** dedicate memory (or resources) to the virtual server—only one virtual server is running on multiple physical machines, so

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not dedicating resources to it makes no sense. The problem Aziz is solving is insufficiency of a single "box" to the task, hence, the need for multiple boxes and scalability issues relating to multiple boxes (see col. 15, lines 18-21 of Aziz). Not dedicating resources to the only process that is running—the virtual server at issue—would only worsen the scalability problems.

Claim 1 also recites "virtual computing environment constructed and arranged to separate user processes on the level of namespace and on the basis of restrictions implemented inside said operating system kernel." The Office Action cited this passage in Aziz as allegedly disclosing this aspect:

In another embodiment, the Web pages enable the customer to choose one of several VSF service plans, such as automatic growth and shrinkage of a VSF between a minimum and maximum number of elements, based on real-time load. The customer may have a control value that allows the customer to change parameters such as minimum number of computing elements in a particular tier such as Web servers, or a time period in which the VSF must have a minimal amount of server capacity. The parameters may be linked to billing software that would automatically adjust the customer's bill rate and generate billing log file entries.

Aziz, col. 16, lines 1-12. Respectfully, this passage is about billing for web pages, and is entirely unrelated to separating user processes running inside a virtual environment. Reconsideration is respectfully requested.

Additionally, the claims are rejected based on a combination of Aziz and Huang. As discussed during the interview, Huang is about virtualizing desktop systems, not servers (i.e., Huang is yet another example of "virtualization" that has no relevance to the pending claims). Applicants' representative understands the Examiner's view that a computer can, in some cases, act as a server, or as a desktop. However, this is irrelevant to trying to combine the two references. The VSF described in Aziz has no such

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virtualized desktop graphical interface (as described in Huang), and, more importantly, **has no need for it**. The independent claims have been amended to more clearly draw attention to the fact that the claimed invention is directed to **servers, not desktops**.¹ Huang's virtual desktop allows a desktop user to access a file on another PC. This is irrelevant to servers, server farms, and virtual servers. It is certainly irrelevant to the Virtual Server Farm of Aziz.

Accordingly, for the reasons discussed above and during the interview, no combination of the cited references produces the invention of claim 1, and, furthermore, no motivation to combine the references in the proposed manner exists. Reconsideration and withdrawal of the rejection of claim 1 is respectfully requested.

Independent claim 4 recites the aspect of **"a plurality of virtual computing environments running on the server, each virtual computing environment being functionally equivalent to a computer."** Aziz does not have a plurality of virtual environments running on a server—it has **multiple computers supporting a single virtual server**.

Similarly, the arguments above regarding "user processes being separated on a namespace level and based on restrictions implemented in the operating system kernel, wherein the virtual computing environments do not require emulation of hardware resources" are equally applicable here. Reconsideration is respectfully requested.

Independent claim 16 is allowable at least for the reasons applicable to claim 10, as well as due to the features recited therein.

All the dependent claims are allowable at least because their base claims are

¹ Applicants note they intend to pursue the desktop applications that are within

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allowable, as well as due to the features recited therein.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

BARDMESSER LAW GROUP



George S. Bardmesser
Attorney for Applicants
Registration No. 44,020

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910 17th Street, N.W.,
Suite 800
Washington, DC 20006
202-293-1191

the scope of this application in a continuation application.

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